

I claim:

1. A cervical compression plate assembly having screw receiving elements at opposite ends thereof configured for engaging bone fixation screws extending from respective vertebral elements, means for permitting the distance between said screw receiving elements at opposite ends to be shortened but preventing said distance from increasing; the improvement comprising compression spring means housed in said assembly and configured for continuously urging said screw receiving elements at opposite ends together for thereby providing continuous compressive loading on bone graft material disposed between the vertebral elements.
2. The cervical compression plate assembly of claim 1, including a screw locking mechanism for locking said screws to said plate assembly.
3. The cervical compression plate assembly of claim 2, wherein said screw receiving elements include screw head seats configured for seating the heads of the bone fixation screws at different attitudes.
4. The cervical compression plate assembly of claim 3, wherein said screw locking mechanism includes pressure fit rings in said screw receiving elements for engaging and locking self tapping threaded shanks of said screws in preselected angles of attitude.

5. The cervical compression plate assembly of claim 1, wherein said compression spring means includes a tension spring.

6. The cervical compression plate assembly of claim 5, wherein said tension spring is a wire under tension.

5 7. The cervical compression plate assembly of claim 6, including a tension torque drive for adjusting the tension applied to said wire.

8. The cervical compression plate assembly of claim 1, wherein said compression spring means includes a compression spring.

9. The cervical compression plate assembly of claim 1, including a removable spacer disposed between said screw receiving elements at opposite ends for initially preventing the distance between said screw receiving elements at opposite ends from being shortened by said compression spring means before application of said plate assembly.

10. A cervical compression plate assembly:
including first and second elongate plates slidably received with respect to
15 each other in their longitudinal direction for adjustably changing the distance between opposite ends of said plate assembly, said opposite ends configured for respective attachment to first and second

vertebra with the aid of bone fixation screws and a lock assembly for locking said first and second plates from further relative distraction therebetween;

and means for permitting the distance between said opposite ends to be shortened;

5 the improvement comprising:

compression spring means received in said plate assembly and configured for urging said opposite ends together for thereby providing continuous compressive loading.

11. The cervical compression plate assembly of claim 10, including a screw locking mechanism for locking said screws to said plate assembly.

10 12. The cervical compression plate assembly of claim 11, wherein said screw receiving elements include screw head seats configured for seating the heads of the bone fixation screws at different attitudes.

13. The cervical compression plate assembly of claim 12, wherein said screw locking mechanism includes pressure fit rings in said screw receiving elements for engaging and 15 locking self tapping threaded shanks of said screws in preselected angles of attitude.

14. The cervical compression plate assembly of claim 10, wherein said compression spring means includes a tension spring.

15. The cervical compression plate assembly of claim 14, wherein said tension spring is a wire under tension.

16. The cervical compression plate assembly of claim 15, including a tension torque drive for adjusting the tension applied to said wire.

5 17. The cervical compression plate assembly of claim 10, wherein said compression spring means includes a compression spring.

18. The cervical compression plate assembly of claim 10, including a removable spacer disposed between said opposite ends for initially preventing the distance between said opposite ends from being shortened by said compression spring means before application of said
10 plate assembly.